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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,019	06/13/2004	Sam Shiaw-Shiang Jiang	ASTP0043USA	4018
27765	7590	09/02/2010	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116				ANDREWS, LEON T
ART UNIT		PAPER NUMBER		
2462				
NOTIFICATION DATE			DELIVERY MODE	
09/02/2010			ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/710,019	JIANG ET AL.	
	Examiner	Art Unit	
	LEON ANDREWS	2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 August 2010.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,3-23 and 25-27 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1, 3-23 and 25-27 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION***RCE***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 12, 2010 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3-18, 23 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable by Admitted Prior Art Figs. 1, 3 of the application in view of Arnold (Pub.

No.: US 2003/0224729 A1), Lundby (Patent No.: US 6,856,604 B2) and Lin et al. (Patent Number: 5,832,000).

Regarding Claims 1 and 27, Admitted Prior Art discloses a method of communicating data comprising:

providing a first peer (Fig. 3, originator 10) and a second peer (Fig. 3, terminator 20);

successively transmitting a first predetermined number of more than one identical copies of a data block (Fig. 3, five copies of the same data block A, ¶ [0011], page 1, lines 3-4) with a first transmitter (Fig. 3, originator 10, Tx) of the first peer (Fig. 3, originator 10);

receiving at least two of the first predetermined number of identical copies of the data block (Fig. 3, terminator 20, data blocks A) with a second receiver (Fig. 3, terminator 20 Rx) of the second peer;

combining more than one corrupted received data blocks to form a complete copy of the data block (Fig. 3, indicate that the data blocks are received with CRC error and the HARQ system combine copies of this degraded communication of the same data block to get a successful received data block, ¶ [0011], pages 1-2, lines 1-5, 12-13) at the second receiver (Fig. 3, terminator 20 Rx) of the second peer (Fig. 3, terminator 20),

transmitting a response (Fig. 1, terminator 20 responds with a demand response to the originator 10, ¶ [0007], page 1, lines 11-12) to the first peer when reconstructing a complete instance of the data block (terminator 20 receives the message and verifies the content of the message, ¶ [0007], page 1, lines 9-10) at the second receiver (Fig. 3,

terminator 20 Rx) with a second transmitter (Fig. 3, terminator 20 Tx) of the second peer (Fig. 3, terminator 20); and

not transmitting a negative acknowledgement to the first peer when receiving corrupted received data block at the second receiver with the second transmitter of the second peer (demand request received at the terminator 20 is corrupted and no response is returned to the originator 10, ¶ [0010], page 1, lines 14-16).

The Admitted Prior Art fails to disclose successively transmitting identical copies of data.

But, Arnold discloses sequentially (successively) transmitted identical data packets, paragraph [0058], page 6, lines 17-20.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Arnold's limitation because this would have allowed the transmitting of identical data packets sequentially in time, paragraph [0058], page 6, lines 20-21.

The combination of the Admitted Prior Art and Arnold fails to disclose identical data.

But, Lundby discloses transmitting identical data to users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's limitation because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Further, the combination of the Admitted Prior Art, Arnold and Lundby fails to disclose reconstructing a complete instance of the data block.

But, Lin et al. discloses reconstruct original message, column 4, lines 30-31.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lin et al.'s limitation because this would have the reconstruction of the original message from the corrupted message, column 4, lines 30-31.

Regarding Claim 3, Admitted Prior Art discloses the method of claim 1 further comprising:

successively transmitting a second predetermined number (Fig. 3, retransmitting data blocks A, ¶ [0011], page 1, lines 5-6) of more than one identical copies of the response with the second transmitter (Fig. 3, terminator 20 Tx) of the second peer (Fig. 3, terminator 20).

The combination of Admitted Prior Art, Lundby and Lin et al. fails to disclose successively transmitting identical copies of data.

But, Arnold discloses sequentially (successively) transmitted identical data packets, paragraph [0058], page 6, lines 17-20.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Arnold's limitation because this would have allowed the transmitting of identical data packets sequentially in time, paragraph [0058], page 6, lines 20-21.

Again, the combination of the Admitted Prior Art, Arnold and Lin et al. fails to disclose identical data.

But, Lundby discloses transmitting identical data to users, column 2, line 4. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's limitation because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Regarding Claim 4, Admitted Prior Art discloses the method of claim 3 wherein the second predetermined number is an odd number.

The combination of the Admitted Prior Art, Arnold and Lundby fails to disclose the predetermined number is an odd number.

But, Lin et al. discloses error-tolerant message comprises forty five elements, column 6, lines 49-51.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lin et al.'s limitation because this would have allowed the retransmission of portions of the message, column 6, lines 59-60.

Regarding Claim 5, Admitted Prior Art discloses the method of claim 1 wherein successively transmitting a first predetermined number of more than one identical copies of a data block (Fig. 3, data blocks A) with a first transmitter (Fig. 3, originator 10, Tx) of the first peer (Fig. 3, originator 10) further comprises:

correctly receiving an expected response of the data block with a first receiver (Fig. 1, terminator 20 verifies content of the message and responds with a Demand Response to the originator 10, ¶ [0007], page 1, lines 10-12); and

disabling the successive transmission of the data block of the first transmitter of the first peer (demand request procedure ends when the Demand Confirm is received by the terminator 20 from the originator 10, ¶ [0007], page 1, lines 15-18).

The combination of the Admitted Prior Art, Lundby and Lin et al. fails to disclose successively transmitting identical copies of data.

But, Arnold discloses sequentially (successively) transmitted identical data packets, paragraph [0058], page 6, lines 17-20.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Arnold's limitation because this would have allowed the transmitting of identical data packets sequentially in time, paragraph [0058], page 6, lines 20-21.

Further, the combination of the Admitted Prior Art, Arnold and Lin et al. fails to disclose identical data.

But, Lundby discloses transmitting identical data to users, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's limitation because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Regarding Claims 6 and 15, Admitted Prior Art discloses the transmitting peer (Fig. 3, originator 10, Tx) and method wherein the expected response is a positive acknowledgment of the data block (Demand Confirm is received by the terminator 20 from the originator 10, ¶ [0007], page 1, lines 15-18).

Regarding Claims 7 and 16, Admitted Prior Art discloses the transmitting peer (Fig. 3, originator 10, Tx) and method wherein the expected response is in a group of possible responding messages of the data block (terminator 20 responds with a Demand response message to the originator 10, and the originator responds with a Demand Confirm message, ¶ [0007], page 1, lines 11-16).

Regarding Claim 8, Admitted Prior Art discloses the method of claim 1 wherein said successive transmitting and said receiving are performed over a dedicated channel shared only by the first and second peers.

The combination of the Admitted Prior Art, Arnold and Lundby fails to disclose dedicated channel.

But, Lin et al. discloses communication links such as microwave links, column 2, lines 4-5.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lin et al.'s limitation because this would have allowed the receiver which forms a receiver circuit for receiving message transmitted by the base station, column 2, lines 36-39.

Regarding Claim 9, Admitted Prior Art discloses the method claim 1 wherein combining more than one corrupted received data blocks comprises taking a rounded arithmetic average for each bit of these received data blocks (Fig. 3, terminator 20, data blocks A).

The combination of the Admitted Prior Art, Arnold and Lundby fails to disclose corrupted received data blocks comprises taking a rounded arithmetic average for each bit.

But, Lin et al. discloses bit error rate after a first application of an error correction algorithm is 1 bit error for every 10,000 bits, column 3, lines 26-28.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lin et al.'s limitation because this would have allowed the reconstruction of the corrupt message, column 3, lines 35.

Regarding Claim 10, Admitted Prior Art discloses the method of claim 1 wherein the number of combined corrupted received data blocks is an odd number.

The combination of the Admitted Prior Art, Arnold and Lundby fails to disclose the corrupted data block is an odd number.

But, Lin et al. discloses error-tolerant message comprises forty five elements, column 6, lines 49-51.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lin et al.'s limitation because this would have allowed the retransmission of portions of the message, column 6, lines 59-60.

Regarding claims 11 and 23 Admitted Prior Art discloses the receiving peer (Fig. 3, terminator 20 Rx) and method wherein the second processor is capable of performing a majority vote for each bit among the received data blocks when combining more than one corrupted received data blocks (Fig. 3, indicate that the data blocks are received with CRC error and the HARQ system combine copies of this degraded communication of the same data block to get a successful received data block, ¶ [0011], pages 1-2, lines 1-5, 12-13), wherein the majority vote means that the combining result of a bit is equal to the value of the bit that happens more frequently than other values of the bit in the corrupted received data blocks.

The combination of the Admitted Prior Art, Arnold and Lundby fails to disclose the majority vote for each bit, and the value of the bit that happens more frequently than the other values.

But, Lin et al. discloses combining matrixes and for each of these matrixes are 10 01 -11 10 (with a majority vote of 1), column 8, lines 34-41, and second matrix has more than two corrupted groups and the combining matrixes and for each of these matrixes are 10 01 -11 10 (with a majority vote of 1), column 8, lines 24-41.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lin et al.'s limitation because this would have allowed the combining matrixes of more than two corrupted groups, column 8, lines 24-25, 34.

Regarding Claims 12 and 18, Admitted Prior Art discloses the transmitting peer (Fig. 3, originator 10, Tx) and method wherein the first predetermined number is an odd number.

The combination of the Admitted Prior Art, Arnold and Lundby fails to disclose the predetermined number is an odd number.

But, Lin et al. discloses error-tolerant message comprises forty five elements, column 6, lines 49-51.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lin et al.'s limitation because this would have allowed the retransmission of portions of the message, column 6, lines 59-60.

Regarding Claim 13, Lin et al. discloses a transmitting peer (Fig. 1, base station 116) of a communications system (Fig. 1, communicating system, column 1, lines 47-48) comprising:

a first antenna (Fig. 2, 201) coupled to a second antenna (Fig. 3, 302) of a receiving peer (Fig. 1, SCU 122) via a transmission medium (communication links such as microwave links, column 2, lines 4-5);

a first transmitter (Fig. 2, transmitter 202) electrically connected to the first antenna for transmitting data blocks;

a first receiver (Fig. 2, caller interface for receiving messages from the PSTN 110, column 2, lines 23-24) electrically connected to the first antenna for receiving a response from the receiving peer (Fig. 1, SCU 122);

a first processor (Fig. 2, processing system 210) electrically connected to the first transmitter for controlling the first transmitter to successively transmit a first predetermined number of more than one identical copies of a data block (Fig. 4, 402) of a data block (Fig. 4, 402) via the first antenna; and

a first power supply (Fig. 1, electrical block diagram of the fixed portion 102 includes the base stations 116, column 2, lines 19-20) electrically connected to the first transmitter and the first processor;

wherein the first processor is capable of detecting an expected response (SCR 122 request retransmission of portions of corrupted messages, column 3, lines 61-62) of the data block at the first receiver, and accordingly stopping the successive transmission of identical copies of the data block at the first transmitter before the first transmitter

finishes transmitting the first predetermined number of more than one identical copies of the data block..

Lin et al. fails to disclose successively transmitting identical data.

But, Arnold discloses sequentially (successively) transmitted identical data packets, paragraph [0058], page 6, lines 17-20.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Arnold's limitation because this would have allowed the transmitting of identical data packets sequentially in time, paragraph [0058], page 6, lines 20-21.

The combination of Lin et al., Arnold and Lundby fails to disclose transmitting identical copies of data.

But, Lundby discloses transmitting identical data, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's limitation because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

Further, the combination of Lin et al. and Lundby fails to disclose response of the data block at the receiver and stopping the transmission of the data block at the transmitter.

But, the Admitted Prior Art the terminator 20 determines that the Demand Request message is unsatisfactory, it returns a Demand Reject message to the originator 10 ending (stopping) the Demand Request procedure by the originator 10, ¶ [0008], page 1, lines 3-7.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Admitted Prior Art's limitation because this would have allowed the ended (stopped) the request message by the originator upon the receipt to the reject message, ¶ [0008], page 1, lines 6-7.

Regarding Claim 14, Lin et al. discloses the transmitting peer of claim 13 wherein the first antenna comprises two sets of antenna units (Fig. 2, RF transmitter 202 coupled to an antenna 201 which together form a transmitter circuit for transmitting received messages, column 2, lines 30-32), one electrically connected to the first transmitter and the other electrically connected to the first receiver (Fig. 3).

Regarding Claim 17, Lin et al. discloses the transmitting peer (Fig. 1, base station 116) of claim 13 wherein the transmission medium is a dedicated channel of electromagnetic waves (Fig. 1, 102 controls a plurality of base stations 116 by way of communication links such as microwave links, column 2, lines 2-5).

4. **Claims 19-22 and 25-26** are rejected under 35 U.S.C. 103(a) as being unpatentable by Lin et al., Lundby and Arnold.

Regarding Claim 19, Lin et al. discloses a receiving peer (Fig. 1, SCU 122) of a communications system (Fig. 1, communicating system, column 1, lines 47-48) comprising:

a second antenna (Fig. 3, 302) coupled to a first antenna (Fig. 2, 201) of a transmitting peer (Fig. 2, transmitter 202) via a transmission medium (communication links such as microwave links, column 2, lines 4-5);

a second receiver (Fig. 3, receiver 304) electrically connected to the second antenna for receiving data blocks;

a second processor (Fig. 3, processor 310) electrically connected to the second receiver for combining more than one data blocks (combination matrix used for reconstructing the original message and information indicating the number of times the combining matrix is to be applied to the error-tolerant message for reconstructing the original message, column 7, lines 25-29) received successively to form a complete copy of the data block; and

a second power supply (Fig. 3, power switch 304) electrically connected to the second receiver and the second processor; and

a second transmitter (Fig. 1, transmitter of another base station 116), wherein the second transmitter transmits a response to the transmitting (transmitting the message redundancy with the reconstruction of the original message, column 4, lines 28-30) when the second processor (processor 310 used for controlling the SCR 122, column 2, lines 43-44) forms a complete copy of the data block; and the second transmitter does not transmit a negative acknowledgement to the transmitting peer when the second receiver receives a corrupted data block (SCR 122 where the error tolerant message is not

adequate for transmitting (to transmitting peer), column 3, lines 44-50).

Lin et al. fails to disclose complete copy of the data.

But, Lundby discloses the remote station receive the uncorrupted data (block), column 5, lines 38-40.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's limitation because this would have allowed the base station to transmit information to a remote station using a format where data was repeated in a packet, column 5, lines 33-35.

The combination of Lin et al. and Lundby fails to disclose successively transmitting identical copies of data.

But, Arnold discloses sequentially (successively) transmitted identical data packets, paragraph [0058], page 6, lines 17-20.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Arnold's limitation because this would have allowed the transmitting of identical data packets sequentially in time, paragraph [0058], page 6, lines 20-21.

Regarding Claim 20, Lin et al. discloses the receiving peer (Fig. 1, SCU 122) of claim 19 wherein the transmission medium is a dedicated channel of electromagnetic waves (Fig. 1, 102 controls a plurality of base stations 116 by way of communication links such as microwave links, column 2, lines 2-5).

Regarding Claim 21, Lin et al discloses the receiving peer (Fig. 1, SCU 122) of claim 19 wherein combining more than one corrupted received data blocks comprises taking a rounded arithmetic average for each bit (bit error rate after a first application of an error correction algorithm is 1 bit error for every 10,000 bits, column 3, lines 26-28) of these received data blocks.

Regarding Claim 22, Lin et al discloses the receiving peer (Fig. 1, SCU 122 of claim 19 wherein the number of combined corrupted received data blocks is an odd number (error-tolerant message comprises forty five elements, column 6, lines 49-51).

Regarding Claim 25, Lin et al. discloses the receiving peer of claim 19 wherein the second transmitter is capable of successively transmitting a second predetermined number (Fig. 4, 406) of more than one identical copies of the response.

Lin et al. fails to disclose transmitting identical copies of data.

But, Lundby discloses transmitting identical data, column 2, line 4.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Lundby's limitation because this would have allowed the base station to make multiple transmissions with the same data content, column 2, lines 1-2.

The combination of Lin et al. and Lundby fails to disclose successively transmitting identical copies of data.

But, Arnold discloses sequentially (successively) transmitted identical data packets, paragraph [0058], page 6, lines 17-20.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Arnold's limitation because this would have allowed the transmitting of identical data packets sequentially in time, paragraph [0058], page 6, lines 20-21.

Regarding Claim 26, Lin et al. discloses the receiving peer (Fig. 1, SCU 122) of claim 25 wherein the second predetermined number is an odd number (error-tolerant message comprises forty five elements, column 6, lines 49-51).

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3-23 and 25-27 have been considered but are moot in view of the new ground(s) of rejection as necessitated by the amendment to the claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Andrews whose telephone number is (571) 270-1801. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao S. Seema can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LA/la
August 24, 2010

/Seema S. Rao/

Supervisory Patent Examiner, Art Unit 2462